

CURRICULUM VITAE

Judah Z. Weinberger, M.D., Ph.D.

Academic Training:

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| B.A. mathematics | Columbia College (summa cum laude) |
| M.A. physics | Columbia University |
| Ph.D immunology | Harvard University |
| M.D. | Harvard Medical School (magna cum laude) |

Postgraduate Training

Internship - Internal Medicine

Brigham and Women's Hospital
Boston, Massachusetts

Residency - Cardiology

Brigham and Women's Hospital
Boston, Massachusetts

Cardiology Research Fellow in Medicine

Brigham and Women's Hospital
Boston, Massachusetts

Cardiology Research/Clinical Fellow in Medicine

Brigham and Women's Hospital
Boston, Massachusetts

Medical Licenses:

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| 1982 | Massachusetts License, Registration No. [REDACTED] |
| 1987 | New York State License, No. [REDACTED] |
| 1991 | Florida License No. [REDACTED] |
| 2007 | New Jersey License No. [REDACTED] |

National Exams

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| 1981 | National Board of Medical Examiners, certificate [REDACTED] |
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Board Qualifications:

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| 2007 | Diplomate, Certification Board of Nuclear Cardiology |
| 1999 | Interventional Cardiology Boards, ACC, ABIM, [REDACTED] |
| 1985 | American College of Cardiology, Board Certified No. [REDACTED] |
| 1984 | American Board of Internal Medicine, Board Certified No. [REDACTED] |

Professional Organization Memberships:

American Heart Association
Fellow, American College of Cardiology
Fellow, Society for Cardiovascular Angiography and Interventions,
American Association for the Advancement of Science
The Harvey Society
Fellow, Society for Cardiac Angiography & Interventions

Academic Appointments:

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| 1984 - 1987 | Assistant Professor of Medicine, Harvard Medical School |
| 1987 - 1994 | Assistant Professor of Medicine, Columbia University |
| 1988 - 1994 | Assistant Professor of Pharmacology and Medicine, Columbia University |
| 1994 - 1999 | Associate Professor of Clinical Medicine, Columbia University |
| 1999 - Present | Associate Professor of Medicine, Columbia University |

Administrative Appointments:

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| 1999 - 2004 | Director, Center for Cardiovascular Device Development, Columbia University |
| 2002 - 2005 | Director, Interventional Cardiology, Columbia Presbyterian Medical Center |
| 2003 - | Consultant and Voting Panel Member, Medical Devices Advisory Committee, CDRH, US Food and Drug Administration [TAXUS drug eluting stent, CardioWest Total artificial heart, Cordis SAPPHIRE carotid stent system, Novacor VAS, Cardiogenesis PMR, Acorn CorCap, AbioMed AbioCor, Webster Biosense, Navistar for AF ablation], |

Hospital Appointments:

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| 1984 - 1987 | Associate Physician, Brigham and Women's Hospital, Boston, MA |
| 1987 - 1994 | Assistant Attending Physician, Columbia Presbyterian Hospital, NY |
| 1992 - 2002 | Director of Research, Cardiac Catheterization Laboratory, Columbia Presbyterian Medical Center, NY |
| 1994 - | Associate Attending Physician, Columbia Presbyterian Medical Center, NY |

Awards and Honors:

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| 1974 | Phi Beta Kappa |
| 1975 | Van Amringe Mathematics Prize, Columbia University |
| 1975 | Michaelis Physics Award, Columbia College |
| 1975 - 1978 | Gillette Fellow, Harvard-M.I.T. Program in Health, Science, and Technology (HST) |
| 1980 | Soma Weiss Scientific Symposium Winner, Harvard Medical School |
| 1980 | Reznick Prize for Excellence in Research, Harvard Medical School |
| 1984 | AFCR Award to Trainees in Clinical Medicine |

Fellowship and Research Support:

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| 1993 - 1998 | Richard and Lynne Kaiser Foundation Award - "New approaches to restenosis after coronary angioplasty;" P.I. - Judah Weinberger, M.D., Ph.D. [REDACTED] |
| 1998 - 2001 | Guidant Corporation Research Award - "Brachytherapy for restenosis". P.I. – Judah Weinberger, M.D., Ph.D. [REDACTED] |
| 1999 - 2004 | Industrial agreements for vascular radiation delivery technologies, P.I. – Judah Weinberger, M.D., Ph.D. \$ [REDACTED] |
| 2000 | CURE Trial -P.I. - Judah Weinberger, M.D., Ph.D. [REDACTED] |
| 2001 | INHIBIT Trial, Guidant Corporation, Columbia P.I. - Judah Weinberger, M.D., Ph.D.\$ [REDACTED] |

Clinical Trial P.I.

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| 1997 - 2000 | CURE Trial (physician sponsored IDE) P.I. - Judah Weinberger, M.D., Ph.D. Guidant Corporation |
| 1998 - 1998 | INHIBIT Trial, Columbia P.I. - Judah Weinberger, M.D., Ph.D. |
| 2003 - 2004 | TandemHeart PTVA System for Cardiogenic Shock Randomized Multi-Center Clinical Study, Columbia Site P.I., Judah Weinberger, M.D., Ph.D. |

Departmental and University Committees

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| 1988 - 2003 | Cardiology Fellowship Selection Committee |
| 1989 - 1991 | Cardiology Research Conference Director |
| 1989 - | Department of Pharmacology graduate student admissions committee |
| 1992 - 1998 | Cardiology Grand Rounds Director |
| 1992 - 2005 | Director, Cardiac Catheterization Research, Columbia University |
| 2002 - 2005 | Director Interventional Cardiology, Columbia Presbyterian Medical Center |

Committees:

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| 1989 - | American Heart Association abstract reviewer |
| 1989 - | <u>American Journal of Medicine</u> reviewer |
| 1989 | <u>Science</u> ad hoc reviewer |
| 1990 - 1991 | New York Academy of Sciences Biochemical Pharmacology Steering Committee |
| 1992 - | <u>Circulation</u> reviewer |
| 1996 - | <u>New England Journal of Medicine</u> - reviewer |
| 1996 - | <u>International Journal of Radiation Oncology, Biology, and Physics</u> - reviewer |
| 1996 - | <u>Journal of the American College Of Cardiology</u> reviewer |
| 1998 - | <u>Arteriosclerosis, Thrombosis, and Vascular Biology</u> - reviewer |
| 1998 - 2000 | Committee on Diagnostic & Interventional Cardiac Catheterization, Council on Clinical Cardiology, AHA |
| 2000 - 2003 | Meeting program committee, AHA Scientific Conference on Therapeutic Angiogenesis & Myocardial Laser Revascularization, 1/24-27/01,Santa Fe, NM. |
| 2002 - 2004 | AHA Study Section CV (Patho) Physiology Peer Review member |

Editorial Boards:

- 1996 – 2004 Journal of Cardiovascular Pharmacology - associate editor
1998 - 2003 Vascular Radiotherapy Monitor - editorial advisory board
1999 - 2003 Cardiovascular Radiation Medicine.- associate editor
2006 - Journal of Cardiovascular Pharmacology – editorial board
2008 - American Journal of Therapeutics-editorial board

Advisory Boards:

- 1996 - 1998 NeoCardia Scientific Advisory Board
1997 - 1998 Medtronic Radiation Advisory Board
1998 - 1999 Guidant Radiotherapy Advisory Board
1998 - 1999 Scientific Advisory Board- International Academy of Cardiology

Publications:

Original, peer reviewed articles:

Weinberger JZ, Greene, MI, Benacerraf B, Dorf, ME. Hapten specific T cell responses to 4-hydroxy-3-nitrophenyl acetyl (NP). I. Genetic control of delayed-type hypersensitivity by VH and I-A region genes. *J Exp Med.* 1979; 149:1336-1348.

Weinberger JZ, Germain RN, Ju S-T, Greene MI, Benacerraf B, Dorf ME. Hapten specific T cell responses to 4-hydroxy-3-nitrophenyl acetyl (NP). II. Demonstration of idotypic determinants on suppressor T cells. *J Exp Med.* 1979; 150:761-776.

Weinberger JZ, Benacerraf B, Dorf ME. Ir gene controlled carrier effects in the induction and elicitation of delayed-type hypersensitivity responses. *J Exp Med.* 1979; 150:1255-1259.

Kipps TJ, **Weinberger JZ**, Benacerraf B, Dorf ME. Comparison of T and B cell reactivity to genes under Ir gene control. *J Immunol.* 1979; 124:1344-1349.

Weinberger JZ, Benacerraf B, Dorf ME. Hapten specific cell responses to 4-hydroxy-3-nitrophenylacetyl (NP). III. Interactions of effector suppressor T cells are restricted by Ia and IgH-V genes. *J Exp Med.* 1980; 151:1413-1423.

Weinberger JZ, Germain RN, Benacerraf B, Dorf ME. Hapten specific cell responses to 4-hydroxy-3-nitrophenylacetyl (NP). V. Role of idiotypes in the suppressor pathway. *J Exp Med.* 1980; 152:161-169.

Sunday ME, **Weinberger JZ**, Benacerrarf B, Dorf ME. Hapten specific cell responses to 4-hydroxy-3-nitrophenylacetyl (NP). IV. Specificity of cutaneous sensitivity responses in F1 hybrids. *J Immunol.* 1980; 125:1601-1605.

Weinberger JZ, Benacerraf B, Dorf ME. Specificity of delayed hypersensitivity in F1.hybrids. *Transplant Proc.* 1981; 13:1167-1169.

Sherr DH, Ju S-T, **Weinberger JZ**, Benacerraf B, Dorf ME. Hapten specific cell responses to 4-hydroxy-3-nitrophenylacetyl (NP). VII. Idiotype specific suppression of plaque forming cell responses. *J Exp Med.* 1981; 153:640-652.

Sunday ME, **Weinberger JZ**, Wolff S, Benacerraf B, Dorf ME. Antireceptor antibody-induced suppression of murine H-Y-specific delayed-type hypersensitivity responses. *Eur J Immunol.* 1981; 11:626-631.

Ruiz-Opazo N, **Weinberger JZ**, Nadal-Ginard B. Developmental expression and regulation of smooth and skeletal muscle alpha-tropomyosin. *Nature (London)* 1985; 315:67-70.

Weinberger J, Baltimore D, Sharp PA. Distinct factors bind to apparently homologous sequences in the immunoglobulin heavy chain enhancer. *Nature (London)* 1986; 332:846-848.

Weinberger J, Jat PS, Sharp PA. Localization of a repressive sequence contributing to B-cell specificity in the immunoglobulin heavy chain enhancer Mol Cell Biol 1988; 8:988-92.

*Stark HC, Weinberger O, **Weinberger J**. Common double- and single-stranded DNA binding factor for a sterol regulatory element. Proc Nat Acad Sci USA 1992; 89:2180-2184.

Marcuzzi A, **Weinberger J**, Weinberger O. HIV gene expression in lymphoid cells alters gene expression in cocultured lymphocytes. J. Virol. 1992; 66:4228-32.

Sherman D, Smith C, Marboe C, Mosca R, **Weinberger J**, Di Tullio M, Homma S. Right atrial angiosarcoma causing a coronary artery fistula: Diagnosis by transesophageal echocardiography. Am Heart J. 1993; 126:254-256.

*Wiedermann JG, Leavy JA, Amols H, Schwartz A, Homma S, Marboe C, **Weinberger J**. Effects of high dose intracoronary irradiation on vasomotor function and smooth muscle histopathology. Am. J. Physiol. 1994; 267 (Heart Circ. Physiol. 36):H125-H132.

*Wiedermann, JG, Marboe C, Amols H, Schwartz A, **Weinberger J**. Intracoronary irradiation markedly reduces restenosis after balloon angioplasty in a porcine model. J Am. Coll. Cardiol. 1994; 23(6):1491-8.

*Wiedermann, JG, Amols H, Marboe C, Schwartz A, **Weinberger J**. Intracoronary irradiation markedly reduces restenosis after balloon angioplasty in a porcine model; six month follow-up. J Am. Coll. Cardiol. 1995, 25(6):1451-6..

* **Weinberger J**, Amols H, Ennis RD, Schwartz A, Wiedermann JG, Marboe C. Intracoronary irradiation: dose response for the prevention of restenosis in swine. Interntl J Radtn Oncol, Biol, Phys. 1996. 36(4):767-775.

Reed EF, Hong B, Ho E, Harris PE, **Weinberger JZ**, and Suciu-Foca N. Monitoring of soluble HLA allonatigens and anti-HLA antibodies identifies heart allograft recipients at risk of transplant associated coronary artery disease. Transplantation 1996 61(4):566-572.

*Amols HI, Reinstein LE, **Weinberger J**. Dosimetry of a radioactive coronary balloon dilatation catheter for treatment of neointimal hyperplasia. Medical Physics 1996 23(10):1783-1788.

Amols HI, Zaider M, **Weinberger J**, Ennis R, Schiff PB, Reinstein LE. Dosimetric considerations for the catheter based beta and gamma emitters in the therapy of neointimal hyperplasia in human coronary arteries. International Journal of Radiation Oncology, Biology, Physics. 1996 36(4):913-921.

*Gu JW. Santiago D. Olowe Y. **Weinberger J**. Basic fibroblast growth factor as a biochemical marker of exercise-induced ischemia. Circulation 1997 95(5):1165-8.

Savoia MT, Liguori C, Nahar T, Marboe C, **Weinberger J**, Di Tullio MR, and Homma S. Transesophageal Echocardiography-Guided Transvenous Biopsy of a Cardiac Sarcoma. J Amer Soc Echocardiography. 1997, 10(7):752-755.

*Amols HI, Trichter F, and **Weinberger J.** Intracoronary radiation for prevention of restenosis: Dose perturbations caused by stents. *Circulation* 1998; 98: 2024-2029

Plutchok JJ, Boxt LM, **Weinberger J**, Fawwaz R, Sherman WH, Van Heertum RL, Differentiation of cardiac tumor from thrombus by combined MRI and F-18 FDG PET imaging. *Clinical Nuclear Medicine*. 23(5):324-5, 1998

***Weinberger J.** Intracoronary radiation using radioisotope-filled balloons. *Herz* 1998 23(6)366-72.

Knapp FF, Guhlke S, Beets AL, Lin WY, Stabin M, Amols H, **Weinberger J.** Endovascular beta radiation for prevention of restenosis using solution radioisotopes: Pharmacologic and dosimetric properties of rhenium-188 compounds. *Cardiovascular Radiation Medicine*. 1(1):86-97, 1999.

Nath R, Yue N, **Weinberger J.** Dose perturbations by high atomic number materials in intravascular brachytherapy. *Cardiovascular Radiation Medicine* 1(2):144-53, 1999.

Weinberger J, Giedd KN, Simon AD, Marboe C, Knapp FF, Trichter F, Wuu CS. Radioactive beta-emitting solution-filled balloon treatment prevents porcine coronary restenosis.. *Cardiovascular Radiation Medicine*.3(1): 252-256,1999.

*Qu X, and **Weinberger, J.** Novel γ -emitting poly(ethylene terephthalate) surface modification. *J Biomed Mater Res*, 52, 492-497, 2000.

*Qu X, and **Weinberger, J.** Encapsulation of Isotope on Novel $^{3/4}$ -emitting Poly(ethylene terephthalate) Surfaces. *J Biomed Mater Res* 57(4): 619-623, 2001

*Qu X, and **Weinberger, J.** Deposition of $^{90}\text{YPO}_4$ and $^{144}\text{CePO}_4$ radioisotopes on polymer surfaces for radiation delivery devices. *Journal of Biomedical Materials Research* 63(2), 2002:98-105

Schwartz RS. Edelman ER. Carter A. Chronos N. Rogers C. Robinson KA. Waksman R. **Weinberger J.** Wilensky RL. Jensen DN. Zuckerman BD. Virmani R. Drug-eluting stents in preclinical studies: recommended evaluation from a consensus group. *Circulation*. 106(14):1867-73, 2002 Oct 1.

Waksman R. **Weinberger J.** Coronary brachytherapy in the drug-eluting stent era: don't bury it alive. *Circulation*. 108(4):386-8, 2003 Jul 29.

*Wuu CS, Schiff P, Marek, Maryanski J, Liu T, Borzillary S, and **Weinberger J.** Dosimetry study of Re-188 liquid balloon for intravascular brachytherapy using polymer gel dosimeters and laser-beam optical CT scanner *Medical Physics*, 30(2) 2003:132-137

Schwartz RS. Edelman ER. Carter A. Chronos NA. Rogers C. Robinson KA. Waksman R. Machan L. **Weinberger J.** Wilensky RL. Goode JL. Hottenstein OD. Zuckerman BD. Virmani R. Preclinical evaluation of drug-eluting stents for peripheral applications: recommendations from an expert consensus group. [Review] *Circulation*. 110(16):2498-505, 2004 Oct 19.

***Weinberger J.** Rundback JH. Ratchford EV. Regulatory approval of peripheral endovascular revascularization devices in the United States: is the horse still in the barn?. [Review] [17 refs] [Journal Article. Review] American Journal of Therapeutics. 12(2):186-91, 2005 Mar-Apr

LaRocca GM. Shimbo D. Rodriguez CJ. Stewart A. Naka Y. **Weinberger J.** Homma S. Pizzarello R. The Impella Recover LP 5.0 left ventricular assist device: a bridge to coronary artery bypass grafting and cardiac transplantation. Journal of the American Society of Echocardiography. 19(4):468.e5-7, 2006 Apr.

Levy Y. Mandler D. **Weinberger J.** Domb AJ. Evaluation of Drug-Eluting Stents' Coating Durability--Clinical and Regulatory Implications. Journal of Biomedical Materials Research Part B: Applied Biomaterials 2009; 91(1):441-451

Levy Y, Tal N, Tzemach G, **Weinberger J**, Domb AJ, Mandler D. Drug-Eluting Stent with Improved Durability and Controllability Properties, Obtained via Electrocoated Adhesive Promotion Layer. Journal of Biomedical Materials Research: Part B - Applied Biomaterials. 2009; 91(2):819-830.

Chapters, Editorials, and Reviews:

Germain RN, Sy M-S, Rock K, Dietz MH, Greene MI, Nisonoff A, **Weinberger JZ**, Dorf ME, Benacerraf B. The role of idiotype and MHC in suppressor T cell pathways. In: Sercarz E, Janeway A, Wigzell H, Foz C(eds.). ICN-UCLA Symposium on Molecular and Cellular Biology. New York: Academic Press, Inc, 1981.

***Weinberger J**, Tauber A. We need to stay with the supercollider: a question of timing. (*letter*) The New York Times 1993: March 9:A18.

*Shachter N, and **Weinberger J**. Mutations of the LDL receptor gene and familial hypercholesterolemia. Trends Endocrinol. Metab. 1994 5(6):245-249.

***Weinberger, J.** What mechanisms are responsible for restenosis following angioplasty?. ACCEL.1995. 27(6).

***Weinberger, J**, Ennis, RD, Amols, HI. Intracoronary irradiation for the prevention of restenosis: analysis in the swine model. In: Waksman R, King SB, Crocker IR, Mould RF, ed. Vascular Brachytherapy. Veenendaal, The Netherlands: Nucleotron, 1996: 142-153.

Amols, HI, **Weinberger, J.** .Intravascular brachytherapy physics: review of radiation sources and techniques. In: Waksman R, King SB, Crocker IR, Mould RF, ed. Vascular Brachytherapy. Veenendaal, The Netherlands: Nucleotron, 1996: 104-115.

***Weinberger, J.** Overview of the Brachytherapy Landscape. In. Radiation and its Impact on Restenosis; Proceedings Report from a Satellite Symposium, XIXth Congress, European Society of Cardiology, Stockholm Sweden. 8/26/97

Amols, HI, Miller, R, **Weinberger, J**, Hall, EJ. Relative biological effectiveness of Re-188 beta

particles: Implications for intravascular brachytherapy. In: Goodhead DT, O'Neill P, Menzel HG, ed. Microdosimetry: an interdisciplinary approach. Cambridge: Royal Society of Chemistry, 1997: 262-265.

***Weinberger, J.** Irradiation and stenting. *Semin Intervent Cardiol* 1997 2(2): 103-108.

***Weinberger, J.** and Simon AD. Intracoronary irradiation for the prevention of restenosis. *Curr. Opinion Cardiol.* 1997. 12(5):468-474.

*Lincoff, AM, **Weinberger, J.** Local drug delivery and endovascular radiation. In: Topol EJ, ed. Comprehensive Cardiovascular Medicine. Philadelphia: Lippincott-Raven Publishers, 1998: 2433-2449.

***Weinberger, J.** Solution-applied beta emitting radioisotope (SABER) system. In: Waksman R, Serruys PW, ed. Handbook of Vascular Brachytherapy. London: Martin Dunitz Ltd., 1998: 33-40.

***Weinberger, J.** Radiation. In Topol EJ. Textbook of Interventional Cardiology. Philadelphia: W.B. Saunders Company 1998: 650-663.

***Weinberger, J.** and Knapp, FF. Use of liquid-filled balloons for coronary irradiation.. In: Waksman R, ed. Vascular Brachytherapy. New York 2nd ed. Futura, 1999: 521-36.

***Weinberger, J.** Solution-applied beta emitting radioisotope (CURE) system. In: Waksman R, Serruys PW, ed. Handbook of Vascular Brachytherapy. 2nd ed. London: Martin Dunitz Ltd., 2000: 121-28.

***Weinberger, J.**, Lincoff AM, Popma J. Endovascular radiation, local drug delivery and embolization protection devices In: Topol EJ, ed. Comprehensive Cardiovascular Medicine. Philadelphia: Lippincott-Raven Publishers, 2nd ed. 2002

***Weinberger, J.** and Knapp, FF. Use of liquid-filled balloons for coronary irradiation.. In: Waksman R, ed. Vascular Brachytherapy. New York 3rd ed. Futura, 2002:753-770.

Somberg J. Laskey W. Morrison D. **Weinberger J.** Letter regarding articles by Kereiakes and Willerson, Mehran et al, and Kaplan et al, "mini-review: expert opinion *Circulation*. 111(12):e164-5; author reply e164-5, 2005 Mar 29.

Somberg J. **Weinberger J.** Late stent thrombosis: problem or not?. [Editorial. Review] *American Journal of Cardiology*. 99(7):1020-3, 2007 Apr 1.

Schwartz RS. Edelman E. Virmani R. Carter A. Granada JF. Kaluza GL. Chronos NA. Robinson KA. Waksman R. **Weinberger J.** Wilson GJ. Wilensky RL. Drug-eluting stents in preclinical studies: updated consensus recommendations for preclinical evaluation. *Circulation: Cardiovascular Interventions*. 1(2):143-53, 2008 Oct.

Abstracts:

*A common single strand and double strand specific DNA binding factor recognizes sterol

regulatory elements. Judah Weinberger, Helene Stark. Circulation 1991; 84(4) II:110.

*Intracoronary Irradiation Acutely Impairs Endothelial and Smooth Muscle Function as Assessed by Intravascular Ultrasound. Joseph Wiedermann, Jeffrey Leavy, Howard Amols, Shunichi Homma, Marco Di Tullio, David Sherman, Mark Apfelbaum, Allan Schwartz, Judah Weinberger, Columbia University, New York, NY. Circulation 1992; 84(4): I-188.

*Prognostic Value of Endomyocardial IL-2R mRNA Levels in Cardiac Transplant Biopsies. Venturella Vangi, Charles Marboe, Ofra Weinberger, Judah Weinberger. Columbia University, New York, NY. Circulation 1992; 86(4): I-36.

*Interleukin-2 Receptor Expression in Endomyocardial Biopsies of Human Cardiac Allografts Correlates With Histologic Grade. Venturella Vangi, Charles Marboe, Jack Correia, Ofra Weinberger, Judah Weinberger, Columbia University, New York, NY. Circulation 1992; 86(4): I-627.

*A Mutant Strain of *Saccharomyces cerevisiae* Deficient in Acyl-CoA:Cholesterol Acyltransferase Activity. Jian-Wei Gu, Ira Tabas, John McDonald, Rodney Rothstein, Judah Weinberger. Columbia University, New York, NY. Circulation 1992; 86(4): I-1.

*Intracoronary Irradiation Markedly Reduces Restenosis after Balloon Angioplasty in a Porcine Model. Joseph Wiedermann, Charles Marboe, Howard Amols, Judah Weinberger, Columbia University, New York, NY. Circulation 1993 86(4): I-655.

*Purification and identification of a single-strand specific DNA binding activity with specificity for a sterol regulatory element. Judah Weinberger, Helene Stark. Circulation 1993 86(4): I-421.

Anatomic and Physiologic Heterogeneity in Syndrome X Patients: An Intravascular Ultrasound Study. Joseph G. Wiedermann, Hal S. Wasserman, Judah Weinberger, Allan Schwartz, Shunichi Homma, Mark Apfelbaum. Circulation 1993 86(4): I-549.

*Intracoronary Irradiation: Minimal Effective Dose for Prevention of Restenosis in Swine. Joseph G. Wiedermann, Charles Marboe, Howard Amols, Allan Schwartz, Judah Weinberger. Circulation 1994; 90(4): I-59

*Intracoronary Irradiation Markedly Reduces Restenosis after Balloon Angioplasty in a Porcine Model: Six Month Follow-Up. Joseph G. Wiedermann, Charles Marboe, Howard Amols, Allan Schwartz, Judah Weinberger. Circulation. 1994; 90(4)

Severe Intimal Thickening by Intracoronary Ultrasound Predicts Early Death in Cardiac Transplant Recipients. Joseph G. Wiedermann, Hal S. Wasserman, Judah Weinberger, Allan Schwartz, Mark Apfelbaum. Circulation 1994; 90(4):I-93.

Coronary Vasomotion in Syndrome X Patients: An Intravascular Ultrasound Study of Exercise Response and Propranolol Effect. Joseph G. Wiedermann, Hal S. Wasserman, Judah Weinberger, Allan Schwartz, Mark Apfelbaum. Circulation 1994; 90(4):I-58.

Intracoronary Irradiation Fails to Reduce Neointimal Proliferation After Oversized Stenting in a

Porcine Model. Joseph G. Wiedermann, Charles Marboe, Howard Amols, Allan Schwartz, Judah Weinberger. Circulation 1995; 92(8):I-146

Biochemical Markers of Ischemia: Basic Fibroblast Growth Factor Levels in Patients with Exercise Induced Ischemia. Jian-Wei Gu, Derek Santiago, Yetunde Olowe, Judah Weinberger. Circulation 1995 92(8):I-91.

Predictive Value of Exercise Induced Changes in Urine Basic Fibroblast Growth Factor. Derek Santiago, Jian-Wei Gu, Yetunde Olowe, Judah Weinberger. Circulation 1996 94(8):I-80.

Beta Irradiation for Restenosis: Considerations for Stent Implantation. Howard Amols, S. Mirzadeh. F.F. Knapp, Judah Weinberger. Circulation 1996 94(8):I-210.

Weinberger J, Mirzadeh S, Knapp FF, Amols H. Beta irradiation for restenosis after stent implantation: Dose variation among differing stents. JACC 1997;29(2):238A.

Giedd, KN, Amols, H, Marboe, C, Knapp, FF, Weinberger, J. Effectiveness of a Beta-Emitting Liquid-Filled Perfusion Balloon to Prevent Restenosis. Circ 1997;96(8):I-220.

Knapp, Jr., F. F., Guhlke, S., Beets, A. L., Amols, H., and Weinberger, J. "Rhenium-188 - Attractive Properties for Intravascular Brachytherapy for Inhibition of Coronary Restenosis After PTCA," 3rd International Conference on Nuclear Cardiology, Florence, Italy, April 6-9, 1997; J. Nucl. Cardiol., 4, S-118 (1997)(Abstract 100.22).

Knapp, F. F., Jr., Guhlke, S., Weinberger, J., Beets, A. L. Amols, H., Palmedo, H. and Biersack, H.-J., "High Specific Volume Rhenium-188 - Clinical Potential of a Readily Available Therapeutic Radioisotope," Invited Lecture, 35th International Meeting of the German Society of Nuclear Medicine, Kassel, Germany, April 16-19, 1997; Nuklearmedizin, 36, A38 (1997).

Knapp, F. F., Jr., Guhlke, S., Beets, A. L., Amols, H. and Weinberger, J. "Intraarterial Irradiation with Rhenium-188 for Inhibition of Restenosis After PTCA - Strategy and Evaluation of Species for Rapid Urinary Excretion," Annual Meeting of the Society of Nuclear Medicine, San Antonio, Texas, June 1-6, 1997; J. Nucl. Med., 38(5 Supl.), 124P (1997).

Knapp FF, Beets AL, Guhlke S, Gledd KN, Marboe C, Amols H, Weinberger J. Rhenium-188 liquid-filled balloons effectively inhibit restenosis in a swine coronary overstretch model - A simple new method bridging nuclear medicine and interventional cardiology. J Nuc Med 39: (5) 181 , Suppl. S May 1998

Weinberger J., Amols HI, Schiff PB, Trichter F, Wang TST, Berke A, Brogno D, Flier J, Knapp FF., Wasserman HS. Initial Results of the CURE Safety Trial: Coronary Brachytherapy with Radioactive-Liquid-Filled Balloons. JACC 1999

Weinberger J, Schiff PB, Trichter F, Wuu C-S, Knapp FF, Schwartz A. Results of the Columbia Safety and Feasibility (CURE) Trial of Liquid Radioisotopes for Coronary Vascular Brachytherapy. Circ. (1999) 100(18):I-75.

Weinberger J, Pinney S, Virmani R, Trichter F, Wuu CS. Brachytherapy induces positive vascular

remodeling using self-expanding stents. J Am Coll Cardiol 2000;35 (Suppl. A):21

Weinberger J; Pinney S; Virmani R; Trichter F; Wuu CS Brachytherapy induces positive vascular remodeling using self-expanding stents JACC 2000, 35, Iss 2, pp 21A

Pinney SP, Weinberger J, Trichter F, Wuu CS, Virmani R. Brachytherapy facilitates late lumen gain when combined with self-expanding stent implantation. Circulation 2000;102 (Suppl. II):424

Sciff PB, Weinberger JZ, Trichter F, Wuu CS. Early results of the Cure safety trial: Coronary brachytherapy with radioactive-liquid-filled balloons. Radiotherapy & Oncology 2001 58(S1):S20.

Wuu CS, Weinberger J, Maryanski M, Borzillary, Liu T, Bul S, Schiff P. Dosimetry study of Re-188 liquid balloon for intravascular brachytherapy using optical laser CT scanning of polymer gel dosimeters. Radiotherapy & Oncology 2001 58(S1):S114.

Addo TA, Kodali S, Weinberger J, et al. Impact of Multi-Vessel Disease on Infarct Size and Clinical Outcomes following Primary Angioplasty for Acute Myocardial Infarction 2005

Costa J, Mintz GS, S.G. Carlier, K. Fujii, K. Sano, M. Kimura, J. Qian, K. Tanaka, Y. Na, J. Lui, M. Collins, E.M. Kreps, G. Dangas, I. Moussa, G.W. Stone, J. Weinberger, J. Moses, M.B. Leon. Limitations of Manufacturers' Compliance Charts in Predicting Final Drug-Eluting Stent Dimensions: An Intravascular Ultrasound Study 2005

Patents

U.S. Patent # 5,503,613 Apparatus and Method to Reduce Restenosis after Arterial Intervention. 4/2/96

U.S. Patent # 5,707,332 Apparatus and Method to Reduce Restenosis after Arterial Intervention. 1/13/98

U.S. Patent # 5,764,723 Apparatus and Method to Gate a Source for Radiation Therapy 6/9/98

U.S. Patent # 5,814,462 Biochemical markers of ischemia. 9/29/98

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